



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

NEIL ANDRE ROBERTS

CASE NO.: VK0001USCIP

APPLICATION NO.: 10/632817

CONFIRMATION NO.: 4605

GROUP ART UNIT: 1751

EXAMINER: John R. Hardee

FILED: August 04, 2003

FOR: REFRIGERANT COMPOSITIONS

SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In compliance with 37 C.F.R. §§1.97 and 1.98, Applicant brings to the attention of the U.S. Patent and Trademark Office the information listed on the enclosed PTO/SB/08A and/or PTO/SB/08B forms. Copies of the cited references are also enclosed.

In addition to the attached listed references (both U.S. patents and non-U.S. patent documents, and technical references), also included in this Second Supplemental Information Disclosure Statement is the complete record from an European Patent Office Opposition relating to European Application No. 98-932436.3-2115, which is the European patent application related, in part, to U.S. Patent 6,428,720 (the subject matter of the pending double patenting rejection in the above referenced application). This record can be accessed on line via www.epoline.org. The references discussed in this European opposition are:

D 1: Roberts, NA; "Determination of the performance, leak scenario, flammability and oil return characteristics of novel R22 replacement"; Proceedings of the Seventh International Refrigeration Conference at Purdue University, West Lafayette, Indiana (1998)

08/16/2006 GWORDOF1 00000166 041928 10632817

01 FC:1806 180.00 DA

- D 2: Roberts, NA, Pearson, SF; "High Efficiency R22 Replacement (ISCEON 59, a mixture of R125, R134a and isobutene)"; Congress Symposium Meeting-Colloque, 1996 Int. Compressor Eng. Conf., Purdue, July 23, 1996
- D 3: EP 0 779 352 A1; Pub. 06-18-1997; Ausimont S.p.A.
- D 4: Butler D; "R22 drop-in a success at BRE"; Refrigeration and Air Conditioning, pp. 49-50 (1994)
- D 5: Fluorocarbon azeotropes, Research Disclosure 16265 (1977)
- D 6: JP 01 139678 (English Translation of the Abstract)
- D 7: JP 01 139675 (English Translation of the Abstract)
- D 8: Pearson SF, "Uses of hydrocarbon refrigerants", I.I.F.-I.I.R. Commissions B1, B2, E1 and E2, pp. 439-46 (1986)
- D 9: E-mail reply from Herrick Conference to Felix Flohr dated May 27, 2003
- D 10: Internet citation, "Conference Organizing Committee", <http://www.ecn.purdue.edu/Herrick/Events/organize-frame.htm>
- D 11: Internet citation, "Registration Information", <http://www.ecn.purdue.edu/Herrick/Events/Registration.htm>
- D 12: ASHRAE Standard 34-2001, "Contents", pp. 7 and 13
- D 13: Sworn Statement by Christoph Meurer
- D 14: Birett K, "Information sheets on hazardous substances" (1996)
- D 15: Soffientini et al., "Evaluation of alternative refrigerants when retrofitting R-22 refrigeration systems", Centro Studio Galileo - - Industria & Formazione Eleventh European Conference, Milan, Italy (2005)
- D 16: Wilson, DP, Richard, RG; "Determination of Refrigerant Lower Flammability Limits in Compliance with Proposed Addendum p to Standard 34"; ASHRAE Transactions 2002, v. 108; pp. 1-17; June 23, 2002
- D 17: Test Protocol for Determination of Refrigerant Properties (Description of Equipment; Chart: Position of Thermocouples and Transducers on LT-Calorimeter; Operating Conditions)

D 18: Roberts, NA; "Energy Saving Refrigerant Blends Comprising
R125, R134a, R600 or R600a"; pp 1-8

D 19: Chart: Vapor Composition Flammability Data

The attached record provides the discussion of the opposer and applicant with respect to the references, as well as the decision of the European Patent Office, which is now on appeal.

In accordance with 35 U.S.C. 1.97(c)(2), please charge \$180 for the filing of this Information Disclosure Statement, as well as any fee deficiency or credit, to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'M. Capria', with a long horizontal line extending to the right.

MARY ANN CAPRIA
Attorney for Applicant
Registration No.: 32,659
Telephone: (302) 992-3749
Facsimile: (302) 892-0699

Dated: August 15, 2006



PTO/SB/08A (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1996, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	10/632,817
Filing Date	August 4, 2003
First Named Inventor	Neil Andre Roberts
Group Art Unit	1751
Examiner Name	John R. Hardee
Attorney Docket Number	VK0001USCIP

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ²	(if known)			
		US -	4,755,316	07-05-1988	Magid et al.	
		US -	5,520,833	05-28-1996	Kaneko	
		US -	5,688,432	11-18-1997	Pearson	
		US -	5,954,995	09-21-1999	Goble	
		US -	6,065,305	05-23-2000	Arman et al.	
		US -	6,076,372	06-20-2000	Acharya et al.	
		US -	6,230,519 B1	05-15-2001	Arman et al.	
		US -	6,511,610 B2	01-28-2003	Caron et al.	
		US -	6,526,764 B1	03-04-2003	Singh et al.	
		US -	6,606,868 B1	08-19-2003	Powell et al.	
		US -	6,629,419 B1	10-07-2003	Powell et al.	
		US -	6,695,973 B1	02-24-2004	Musso et al.	
		US -	6,783,691 B1	08-31-2004	Bivens et al.	
		US -	2002/0050583 A1	05-02-2002	Caron et al.	
		US -				

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ₆
		CountryCode ³	Number ⁴ Kind Code ⁵ (if known)				
		JP	2002 228307 A	08-14-2002	Matsushita Electric		X
		CN	1183451	06-03-1998	Gu Chujun		X
		CN	1280166 A	01-17-2001	Qinghua University		X
		EP	0 399 817 B1	11-28-1990	DuPont		<input type="checkbox"/>
		EP	0 427 604 B1	04-21-1993	Elf Atochem S.A.		<input type="checkbox"/>
		EP	0 539 952 B1	05-05-1993	Matsushita Electric		<input type="checkbox"/>
		EP	0 565 265 B1	12-13-1995	Star Refrigeration Ltd.		<input type="checkbox"/>
		EP	0 659 862 A1	06-28-1995	Sanyo Electric Co.		<input type="checkbox"/>
		EP	0 856 571 B1	04-16-2003	Showa Denko Kabushiki Kaisha		<input type="checkbox"/>
		EP	1 184 438 B1	03-06-2002	Atofina		<input type="checkbox"/>
		EP	1 193 305 A1	04-03-2002	Honeywell International		<input type="checkbox"/>
		GB	2 247 462 A	04-03-1992	Star Refrigeration Ltd.		<input type="checkbox"/>
		GB	2 250 514 A	06-10-1992	Star Refrigeration Ltd.		<input type="checkbox"/>
		GB	2 327 427 A	01-27-1999	Rhodia Limited		<input type="checkbox"/>
		GB	9923088.0	09-30-1999	Refrigerant Products Ltd.		<input type="checkbox"/>
		GB	0005043.5	03-02-2000	Refrigerant Products Ltd.		<input type="checkbox"/>
		GB	0010171.7	04-27-2000	Refrigerant Products Ltd.		<input type="checkbox"/>
		GB	2 356 867 A	06-06-2001	Rhodia Limited		<input type="checkbox"/>
							<input type="checkbox"/>

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Complete if Known	
Application Number		10/632,817			
Filing Date		August 4, 2003			
First Named Inventor		Neil Andre Roberts			
Group Art Unit		1751			
Examiner Name		John R. Hardee			
Attorney Docket Number		VK0001USCIP			
Sheet	2	of	3		

U.S. PATENT DOCUMENTS						
Examiner Initials *	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number – Kind Code ² (if known)				
		US -				
		US -				
		US -				
		US -				
		US -				
		US -				

FOREIGN PATENT DOCUMENTS							
Examiner Initials *	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ₆
		CountryCode ³	Number ⁴ Kind Code ⁵ (if known)				
			JP 01108291	10-19-1997	Daikin Kogyo KK		<input type="checkbox"/>
			JP 2576161 B2 (JP 1-139675)	01-29-1997	Asahi Glass KK		<input checked="" type="checkbox"/>
			JP 2576162 (JP 1-139675)	01-29-1997	Asahi Glass Co. Ltd.		<input checked="" type="checkbox"/>
			JP 2584337 B2 (JP 4-18484)	02-26-1997	Sanyo Electric Co. Ltd.		<input checked="" type="checkbox"/>
			JP 1997059611 A	03-04-1997	Sanyo Electric Co. Ltd.		<input checked="" type="checkbox"/>
			JP 3127138 B2	01-22-2001	Showa Denko K.K.		<input checked="" type="checkbox"/>
			JP 3754198 B2	12-22-2005	Sanyo Electric Co. Ltd.		<input checked="" type="checkbox"/>
			KR 1997-022058	05-28-1997	(Kosh-N) Hankook Shimwha Co. et al.		<input checked="" type="checkbox"/>
			RU 2 072 382 C	01-27-1997	Podchernjaev et al.		<input type="checkbox"/>
			RU 2 135 541	08-27-1999	Rossiiskij nauchnyj tsentr "Prikladnaja khimija"		<input type="checkbox"/>
			RU 2 161 637 C2	10-01-2001	Beljaev, Andrej Jur'evich		<input type="checkbox"/>
			WO 93/01152 A2	01-21-1993	DuPont		<input type="checkbox"/>
			WO 93/15163 A1	08-05-1993	Allied-Signal		<input type="checkbox"/>
			WO 94/00529 A1	01-06-1994	Great Lakes Chemical Corporation		<input type="checkbox"/>
			WO 00/56834	09-28-2000	DuPont		<input type="checkbox"/>
			WO 01/23491 A1	04-05-2001	Refrigerant Products Ltd.		<input type="checkbox"/>
			WO 01/23492 A1	04-05-2001	Refrigerant Products Ltd.		<input type="checkbox"/>
			WO 01 23493 A1	04-05-2001	Refrigerant Products Ltd.		<input type="checkbox"/>
			WO 02/24829 A1	03-28-2002	Rhodia Organizue Fine Limited		<input type="checkbox"/>
			WO 02 26912 A	04-04-2002	Honeywell International		<input type="checkbox"/>
			WO 02 26913 A2	04-04-2002	Honeywell International		<input type="checkbox"/>
							<input type="checkbox"/>

Examiner Signature	Date Considered	
-----------------------	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 3

Complete if Known

Application Number	10/632817
Filing Date	August 04, 2003
First Named Inventor	NEIL ANDRE ROBERTS
Group Art Unit	1751
Examiner Name	John R. Hardee
Attorney Docket Number	VK0001USCIP

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		WILSON, DP, RICHARD, RG; "Determination of Refrigerant Lower Flammability Limits in Compliance with Proposed Addendum p to Standard 34"; ASHRAE Transactions 2002, v. 108; pp. 1-17; June 23, 2002	<input type="checkbox"/>
		ROBERTS, NA, PEARSON, SF; "High Efficiency R22 Replacement (ISCEON 59, a mixture of R125, R134a and isobutane)"; Congress Symposium Meeting-Colloquy, 1996 Int. Compressor Eng. Conf., Purdue, July 23, 1996	<input type="checkbox"/>
		ROBERTS, NA; "Energy Saving Refrigerant Blends Comprising R125, R134a, R600 or R600a"; European Conference (Milan); pp-108; June 17-18, 2005	<input type="checkbox"/>
		" Final Draft International Standard-Projet Final de Norme Internationale", International Electrotechnical Commission, IEC; December 17, 2004	<input type="checkbox"/>
		SANDERS PA., "Table 14-2 Flammability Limits of Various Propellants in Air", Handbook of Aerosol Technology, Second Edition, Malabar, Florida, pp. 233, 250 (1987)	<input type="checkbox"/>
		Test Protocol for Determination of Refrigerant Properties (Description of Equipment; Chart: Position of Thermocouples and Transducers on LT-Calorimeter; Operating Conditions)	<input type="checkbox"/>
		Chart: Vapor Composition Flammability Data	<input type="checkbox"/>
		English Abstract: JP 01108291	<input checked="" type="checkbox"/>
		English Abstract: RU 2161637	<input checked="" type="checkbox"/>
			<input type="checkbox"/>
			<input type="checkbox"/>

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

1 EP 0998 539 B1 AS GRANTED
2 WO 99/03947 AS FILED
3 GB 9714880.3 PRIORITY DOCUMENT
4 NOTICE OF OPPOSITION

5 GROUNDS OF OPPOSITION 8-7-2003

6 D1

7 D2

8 D3

9 D4

10 D5

11 D6

12 D7

13 D8

14 PATENTEE'S RESPONSE 8-4-2004

15 SUMMONS 16-7-2004

16 OPPONENTS FINAL SUBMISSIONS

17 D9 - D11

18 PATENTEE'S FINAL SUBMISSIONS

19 D12

20 REQUESTS.

1 Decision under Appeal 3.5.2005

2 Minutes & Requests

3 Allowed claims

4 Opponent's Grounds of Appeal 13.9.2005

5 D13: Declaration of C. Meuer

6 D14: R600/R600a Data sheets

7 D15: Evaluation of alternative refrigerants
when retrofitting R22 refrigeration systems

8 Patentee's Grounds of Appeal 30

9 Requests

10 Patentee's Counterstatement 30-3-2006

11 Amended Requests 3.30.2004

12 D16: ASHRAE Transactions 2002 739-756

13 D17: Test Protocol for determination of
refrigerant properties

14 D18: Energy Saving Refrigerant Blends

15 D19: Vapour Composition Flammability Data

16 Translation of Solvay's Response

17 Change of Name to DuPont

18 DuPont's Submission Responding to
Solvay's Appeal (3/30/06) Duplicate of Above

19

20